



1. GENERAL SPECIFICATION

ITEM		UNIT	SPECIFICATION		SELECTION	
CAPACITY	PALLET SIZE	mm	400X400		DEFAULT	
	MAX. WORKPIECE SIZE	mm	600			
		DIAMETER				
		HEIGHT	800			
	MAX. WORKPIECE WEIGHT	kg	400			
	SPINDLE NOSE TO TABLE CENTER	mm	150 ~ 715			
	SPINDLE CENTER TO PALLET TOP	mm	50 ~ 610			
	MAIN DIMENSION	LENGTH	mm	4560		
		WIDTH	mm	2250		
		HEIGHT	mm	2830		
MACHINE WEIGHT(NET) ⁽¹⁾			kg	11000		
UTILITY	CONTROL POWER	V/Hz	200/50		DEFAULT	
			220/60			
			380/50,60			
			400/50,60			
			415/50,60			
	REQUIRED POWER CAPACITY	PH	440/50,60			
			3			
			58			
			0.54			
			330			
MACHINE COLOR			DOOSAN 4 TONE COLOR MT DARK GRAY(5.3PB 3.0 / 0.4) MT MIDDLE GRAY(4.4PB 4.8 / 0.1) MT LIGHT GRAY(3.3B 7.8 / 0.4) MT BLUE(6.1PB 5.9 / 7.6)		STD. SELECTIVE	
CNC CONTROL	MODEL	OPT.	USER DEFINED		SELECTIVE	
			OPT.			

(1) SPECIFIED WEIGHT IS BASED ON THE MACHINE WITH STANDARD SPECIFICATION AND INCLUDING STANDARD ACCESSORIES AND EQUIPMENTS

2. SPINDLE HEAD

ITEM		UNIT	SPECIFICATION		SELECTION	
MOTOR	TYPE		aP22/8000i		SELECTIVE	
	POWER(CONT./SHORT)	kW	11/18.5(15min)			
	MAX. SPINDLE SPEED	r/min	8000			
	BASIC SPEED	r/min	750			
	MAX. TORQUE(SHORT TERM)	N·m	286.2(15min)			
	ORIENTATION		MZ - SENSOR			
	POWER TRANSMISSION		BELT DRIVEN			
	TYPE		aT22/10000i			
	POWER(CONT./SHORT)	kW	22/26(30min)			
	MAX. SPINDLE SPEED	r/min	10000			
SPINDLE TOOL CLAMPING FORCE	BASIC SPEED	r/min	1500		OPT.	
	MAX. TORQUE(SHORT TERM)	N·m	165.6(30min)			
	ORIENTATION		MZ - SENSOR			
	POWER TRANSMISSION		DIRECT CONNECTION			
	SPINDLE TOOL CLAMPING FORCE	kN	9.8(15.7) ⁽¹⁾			
TAPER TYPE			ISO #40, 7/24 TAPER		DEFAULT	
SPINDLE COOLING	TANK CAPACITY	L	18.0			
	CAPACITY	Kcal/h	1048.0			

(1) IN CASE OF HSK SPINDLE, TOOL CLAMPING FORCE IS 15.7kN

HC 400

3. TABLE

ITEM		UNIT	SPECIFICATION	SELECTION
1' INDEX	POSITIONING ACCURACY	deg.	±3"	STD. SELECTIVE
	REPEATABILITY ACCURACY	deg.	±1"	
	MAX. ROTATING SPEED	r/min	25	
	CLAMPING FORCE	kN	63	

4. AXES SYSTEM

ITEM		UNIT	SPECIFICATION	SELECTION
STROKE	X AXIS	mm	600	DEFAULT
	Y AXIS	mm	560	
	Z AXIS	mm	565	
RAPID TRAVERSE	X AXIS	m/min	40	
	Y AXIS	m/min	40	
	Z AXIS	m/min	40	
ACCELERATION / DECELERATION TIME	X AXIS	msec	220	
	Y AXIS	msec	220	
	Z AXIS	msec	220	
MAX. CUTTING FEEDRATE		mm/min	20,000	
RATED THRUST FORCE AT STALL		kN	8.6	
BALL SCREW(DIAMETER x LEAD)	X AXIS	mm	40X16	
	Y AXIS	mm	40X16	
	Z AXIS	mm	40X16	
ACCURACY	POSITIONING	mm	±0.005/FULL STROKE	
	REPEATABILITY	mm	±0.002	
DRIVE MOTOR TYPE	X AXIS		a22/3000i	
	Y AXIS		a22B/3000i	
	Z AXIS		a22/3000i	
	B AXIS	INDEX	a8/3000i	
		ROTARY	a12/3000i	
DRIVE MOTOR	X AXIS	kW	4.0	
	Y AXIS	kW	4.0	
	Z AXIS	kW	4.0	
	B AXIS	INDEX	1.6	
		ROTARY	3.0	
FEEDBACK SYSTEM	INCREMENTAL PULSE CODER		X,Y,Z	STD. SELECTIVE
	ABSOLUTE PULSE CODER		B	
			X,Y,Z	
	LINEAR SCALE	X AXIS		
		Y AXIS		
		Z AXIS		

ITEM		UNIT	SPECIFICATION		SELECTION		
TOOL SHANK	PULL STUD		MAS403 BT 40	PS806(NIKKEN)	STD.		
			CAT 40	MODIFIED DIN	OPT.		
			DIN 69871-A40	DIN 69872 #40	OPT.		
			ISO 12164-1HSK-A63	-	OPT.		
TOOL STORAGE CAPACITY		ea	40		STD.		
		ea	60		OPT.		
		ea	120 (60+60 MAG.)		OPT.		
		ea	170 (MATRIX)		OPT.		
		ea	262 (MATRIX)		OPT.		
TOOL SELECT TYPE			FIXED ADDRESS		DEFAULT		
MAX. TOOL DIAMETER		mm	Φ75(CONT.), Φ140(ADJACENT POTS EMPTY)				
MAX. TOOL LENGTH		mm	300				
MAX. TOOL WEIGHT		kg	10				
MAX. TOOL MOMENT		N·m	11.8				
T-T-T TIME		s	LESS THAN 7.5kg : 1.5, MORE THAN 7.5kg : 2.0		OPT.		
C-T-C TIME		s	LESS THAN 7.5kg : 4.0, MORE THAN 7.5kgf : 4.5				

6. APC & PALLET MAGAZINE

ITEM		UNIT	SPECIFICATION		SELECTION	
PALLET SURFACE	TAP PALLET		24-M16xP2.0		STD.	
	T-SLOT PALLET		4-18H8		OPT.	
MAX. WORKPIECE WEIGHT		kg	400		DEFAULT	
PALLET CHANGE TYPE			ROTARY SHUTTLES			
PALLET ROTATION IN SETUP STATION			MANUALLY 90°			
TWIN PALLET	NUMBER OF PALLET	ea	2		OPT.	
	MIN. PALLET CHANGE TIME	s	8			
	MAX. WORKPIECE SIZE	mm	Φ600 x 800h			
MULTI PALLET STATION ⁽¹⁾	NUMBER OF PALLET	ea	7		SELECTIVE	
		ea	9 ^(NOTE.3)			
	MAX. WORKPIECE SIZE	mm	Φ600 x 800h			
	MAGAZINE TYPE		BUFFER STATION TYPE with CARRIER			
	OPERATION		SCHEDULED OPERATION			
	PALLET DRIVE DEVICE		SERVO MOTOR & REDUCTION GEAR		OPT.	
	PALLET SELECT TYPE		RANDOM			
HYDRAULIC POWER UNIT		kW	2.2			

(1) IT IS POSSIBLE UNDER NC "FANUC 32i-A" BUT CAN'T BE USED WITH MATRIX MAGAZINE SIMULTANEOUSLY.

IF NC "FANUC 31i-A" IS USED, MPS(MULTI PALLET STATION) AND MATRIX MAGAZINE CAN BE USED SIMULTANEOUSLY.

7. LUBRICATION & HYDRAULIC SYSTEM

ITEM		UNIT	SPECIFICATION		SELECTION	
LUBRICATION	TANK CAPACITY	L	1.4		DEFAULT	
	PUMP MOTOR POWER	kW	0.057			
	DISCHARGE PRESSURE	MPa	1.66			
HYDRAULIC SYSTEM	TANK CAPACITY	L	43		DEFAULT	
	MOTOR CAPACITY	kW	2.2			
	OPERATING PRESSURE	MPa	5.39			

8. COOLANT SYSTEM

ITEM		UNIT	SPECIFICATION		SELECTION	
FLOOD COOLANT	TANK CAPACITY	L	550		DEFAULT	
	PUMP MOTOR POWER	kW	1.5			
	FILTRATION	mesh	10(TANK SCREEN FILTER)			
	MAX. PRESSURE	MPa	0.68(60Hz)/0.49(50Hz)			
	MAX. FLOWRATE	L/min	30			
COOLANT SYSTEM	PUMP MOTOR POWER	kW	1.5		OPT.	
	FILTRATION	μm	20-30(CYCLONE TYPE)			
	MAX. PRESSURE UNDER BLOCKING	MPa	1.91			
	MAX. FLOWRATE WITHOUT TOOL	L/min	20(60Hz)/16.6(50Hz)			
COOLANT SYSTEM	PUMP MOTOR POWER	kW	3.0		OPT. SELECTIVE	
	FILTRATION	μm	20-30(CYCLONE TYPE)			
	MAX. PRESSURE UNDER BLOCKING	MPa	2.94			
	MAX. FLOWRATE WITHOUT TOOL	L/min	20(60Hz)/16.6(50Hz)			
COOLANT SYSTEM	PUMP MOTOR POWER	kW	7.5		OPT.	
	FILTRATION	μm	20-30(CYCLONE TYPE)			
	MAX. PRESSURE UNDER BLOCKING	MPa	6.86			
	MAX. FLOWRATE WITHOUT TOOL	L/min	30(60Hz)/25(50Hz)			
SHOWER COOLANT	PUMP MOTOR POWER	kW	0.9		OPT. SELECTIVE	
	FILTRATION	mesh	10(TANK SCREEN FILTER)			
	MAX. PRESSURE	MPa	0.098(60Hz)/0.063(50Hz)			
	MAX. FLOWRATE	L/min	200			
COOLANT GUN ⁽²⁾	PUMP MOTOR POWER	kW	0.4		OPT. SELECTIVE	
	FILTRATION	mesh	10(TANK SCREEN FILTER)			
	MAX. PRESSURE	MPa	0.15(60Hz)/0.11(50Hz)			
	MAX. FLOWRATE	L/min	40			
OIL SKIMMER	TYPE		BELT		OPT. SELECTIVE	

(1) THERE ARE COOLANT PIPING INSIDE OF THE MACHINE & ROTATING UNION ON THE SPINDLE HEAD FOR TSC READY.

(2) THIS DEVICE IS OPERATED BY APC SET-UP DOOR

9. CHIP CONVEYOR & BUCKET

ITEM		UNIT	SPECIFICATION		SELECTION	
CONVEYOR	HINGED PLATE TYPE CONVEYOR	SET			OPT. SELECTIVE	
	SCRAPER TYPE CONVEYOR	SET				
	2-STEP DRUM CHIP CONVEYOR	SET				
BUCKET	TYPE		DOOSAN STANDARD TYPE		OPT. SELECTIVE	
	CAPACITY	L	300			

10. COOLING FOR ELECTRIC CABINET

ITEM	UNIT	SPECIFICATION	SELECTION	
FAN COOLER			STD.	
AIR CONDITIONER			OPT.	SELECTIVE

11. ACCESSORIES

ITEM	UNIT	SPECIFICATION	SELECTION	
WORK LIGHT	SET	HALOGEN LAMP & FLUORESCENT LAMP	DEFAULT	
OPERATOR CALL LAMP	SET	3-COLOR SIGNAL TOWER		
INSTALLATION PARTS	SET	1		
SPARE PARTS(FUSES & ETC.)	SET	1		
ASSEMBLY & OPERATION TOOLS	SET	1		
AUTO TOOL LENGTH MEASUREMEN	MAKER/SPEC.	SET RENISHAW/TS27R ⁽¹⁾	OPT.	
AUTO TOOL BREAKAGE DETECTION	MAKER/SPEC.	SET OMRON/D5A ⁽¹⁾	OPT.	SELECTIVE
	MAKER/SPEC.	SET FAR-EAST MACHINE TOOL/FEM-1CP(NEELDE TYPE IN CUTTING AREA)	OPT.	
AUTO WORKPIECE MEASUREMENT	MAKER/SPEC.	SET RENISHAW/OMP60	OPT.	SELECTIVE
5TH AXIS PREPARATION		SET USER DEFINED	OPT.	SELECTIVE
AIR GUN	SET	-	OPT.	SELECTIVE

(1) THIS DEVICE IS UP & DOWN MOVING TYPE.

< NOTE >

1. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.
2. ALL SPECIFIED VALUES ARE GIVEN AT STANDARD ELECTRIC POWER CONDITIONS (60Hz, 220V)
3. PLEASE INQUIRE DOOSAN INFRACORE R&D DEPARTMENT WHEN END-USER SELECT * MARKS NECESSARILY
4. MACHINE LAY-OUT AND WEIGHT ARE CHANGED ACCORDING TO OPTIONAL SPECIFICATION.
5. PLEASE REFER TO LAY-OUT AND FOUNDATION DRAWING IN RELATION TO INSTALLATION/ELECTRIC DEVICE.
6. ALL SPECIFIED VALUES OF PRESSURE AND FLOW RATE OF COOLANT AND HYDRAULIC PUMP ARE GIVEN AT PUMP OUTLET.
7. THE FLOWRATE AND THE PRESSURE OF COOLANT ARE GIVEN AT THE CONDITION OF USING WATER SOLUBLE COOLANT.
8. SINCE PRESSURE AND FLOWRATE OF T-S-C HAVE INFLUENCE ON TOOL LIFE AND CUTTING CAPABILITY, TYPE OF T-S-C SHOULD BE SELECTED WITH PRUDENCE.

FOR DETAIL SPECIFICATION ABOUT T-S-C , REFER TO CHAPTER II -12-B OF MACHINING CENTER SALES GUIDES.

9. REFER TO THE SEPARATED SPEC. SHEETS IN RELATION TO SPECIFICATION, FUNCTION AND OPTION OF CNC CONTROLLER.